REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on March 10, 2003, and the references cited therewith.

No claims are amended, no claims are canceled, and no claims are added; as a result, claims 1, 2, 4-10, 12-15, 17-23, 25-31, 33-37, 51, 52, and 54-56 remain pending in this application.

§103 Rejection of the Claims

Claims 1-2, 4, 14-15, 17, 51-52, and 54-56 were rejected under 35 USC § 103(a) as being unpatentable over Maiti (U.S. 006020024 A) in view of Park (U.S. 5,795,808) or Takeoka (U.S. 4,647,947) or Thomas (U.S. 4,920,071).

Claims 22-23, 25, 30-31, and 33 were rejected under 35 USC § 103(a) as being unpatentable over Maiti (U.S. 006020024 A) in view of admitted prior art (pages 1-4) and Park (U.S. 5,795,808) or Takeoka (U.S. 4,647,947) or Thomas (U.S. 4,920,071).

Applicant does not admit that Maiti is indeed prior art and reserves the right to swear behind this reference at a later date. Nevertheless the Applicant believes that the present invention is distinguishable from the reference for the following reasons.

The rejection states that, "It is understood that Maiti teaches vapor deposition of a metal oxide, or sputtering and oxidation of a metal layer and that the instant application teaches electron beam evaporation as an improvement to sputtering and oxidizing the metal." The rejection also states that, "Park deposits a zirconium film by electron beam deposition (column 4 lines 16-17) at 99. 0 purity or higher (column 4 line 25). Takeoka deposits a zirconium film by electron beam deposition (column 7 lines 65-68). Thomas deposits a zirconium film by electron beam deposition (column 4 lines 55-65)."

Maiti appears to show a sputtering process followed by an O_2 anneal (col. 3, line 37). However, Maiti does not show, teach or suggest evaporation depositing a metal layer on the body region using electron beam evaporation. In contrast, Applicant's independent claims 1, 9, 14, 22, 30, 51, and 55 include evaporation depositing a metal layer on the body region using electron beam evaporation.

The multiple references of Park, Takeoka, and Thomas are asserted in the present office action to show that electron beam evaporation deposition is well known in the art. Park appears to show a zirconium film 17 deposited over an entire transistor. Takeoka appears to show formation of a metal film 52 for use as a recording media. Thomas appears to show deposition of zirconium in contact regions. However, Applicant respectfully maintains that none of these references teach the formation of a **gate oxide** layer. Applicant respectfully submits that there is no motivation to combine the references to form a **gate oxide** layer as taught by Applicant's specification, and as claimed in the present application..

The Office Action must provide specific, objective evidence of record for a finding of a suggestion or motivation to combine reference teachings and must explain the reasoning by which the evidence is deemed to support such a finding. *In re Sang Su Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002). The Office Action stated "It would be obvious to one skilled in the requisite art at the time of the invention to modify Maiti by substituting electron beam evaporation as it is a well known art recognized equivalent to sputtering," which is a mere conclusory statement of subjective belief, so Applicant respectfully submits that the Office Action has not provided objective evidence for a suggestion or motivation to combine the references.

Because no motivation to combine the references of Maiti with Park, Takeoka, or Thomas has been shown, a 35 USC § 103(a) rejection is not supported. Reconsideration and withdrawal of the rejection is respectfully requested with respect to Applicant's independent claims 1, 9, 14, 22, 30, 51, and 55. Additionally, reconsideration and withdrawal of the rejection is respectfully requested with respect to the remaining claims that depend therefrom as depending on allowable base claims.

The rejections further refers to the Park, Takeoka, and Thomas references and states that, "All three of the above references, taken alone or collectively, teach that electron beam deposition is a well-known art recognized equivalent method to sputtering."

It is Applicant's position that the references cannot be combined with Maiti, as stated above. However, Applicant further submits that even if the references were combined, in the context of a **gate oxide**, electron beam deposition is not equivalent to sputtering. The present

application discusses several technical challenges that must be overcome in the formation of gate oxide layers, for example, on page 2, lines 3-23, and on page 3, lines 1-8. The present application specifically teaches that sputtering deposition no longer is sufficient to meet increasing performance needs. For example, the present application teaches that sputtering creates large amounts of surface damage.

Applicant respectfully submits that pursuant to MPEP 2141.02, and *In re Sponnoble*, 405 F.2d 578, 585, Applicant's discovery of the problems associated with sputtering, and Applicant's claimed methods of overcoming these problems, are not obvious when considered as a whole. Reconsideration and withdrawal of the 35 USC § 103(a) rejection is therefore respectfully requested.

Claims 5-7, 18-20, 26-28, and 34-36 were rejected under 35 USC § 103(a) as being unpatentable over Maiti (U.S. 006020024 A) in view of the admitted prior art and Park (U.S. 5,795,808) or Takeoka (U.S. 4,647,947) or Thomas (U.S. 4,920,071) as applied to claims 1, 14, 30, above, and further in view of Yano (U.S. 005810923 A).

Claims 8-10, 12-13, and 21 were rejected under 35 USC § 103(a) as being unpatentable over Maiti (U.S. 006020024 A) in view of Park (U.S. 5,795,808) or Takeoka (U.S. 4,647,947) or Thomas (U.S. 4,920,071) and in further view of Moise (U.S. 006211035 B1) and Yano (U.S. 005810923 A).

Claims 29 and 37 were rejected under 35 USC § 103(a) as being unpatentable over Maiti (U.S. 006020024 A) in view of admitted prior art and Park (U.S. 5,795,808) or Takeoka (U.S. 4,647,947) or Thomas (U.S. 4,920,071) and in further view of Moise (U.S. 006211035 B1).

Applicant respectfully submits that the additional references of Yano and Moise fail to cure the deficiencies of Maiti, and Park, Takeoka, or Thomas as outlined above. Reconsideration and withdrawal of the 35 USC § 103(a) rejection is respectfully requested with respect to claims 5-10, 12-13, 18-21, 26-29, and 34-37.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 373-6944 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop RCE, Commissioner of Patents, P.O.Box 1450, Alexandria, VA 22313-1450, on this 10th day of June, 2003

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Signature